

OPTICAL AMPLIFICATION OF MOLECULAR INTERACTIONS USING LIQUID CRYSTALS

ABSTRACT OF THE DISCLOSURE

5 Interactions between molecules which are components of self-
assembled monolayers and other molecules can be amplified and transduced into an
optical signal through the use of a mesogenic layer. The invention provides a device
and methods for detecting analytes. The device comprises a substrate onto which a
self-assembled monolayer is attached and a mesogenic layer which is anchored by the
10 self-assembled monolayer. The mesogenic layer undergoes a change in conformation
in response to the molecular interaction.